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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,521	11/24/2003	Akira Takeda	S004-5169	5322
7590	11/26/2004		EXAMINER	
			NGUYEN, HIEP	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 11/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/721,521	TAKEDA ET AL.	
	Examiner Hiep Nguyen	Art Unit 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 24 November 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-8 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    - Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

### *Specification*

The disclosure is objected to because of the following informalities: the specification does not describe what are the “a standard voltage” and “a reference voltage”.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction and /or clarification is required.

Regarding claim 1, the recitation “a standard voltage” and “a reference voltage” are indefinite because it is not clear what they are in the drawing.

Regarding claim 2, the recitation “and the second reference voltage coincides with and offset voltage ...” on lines 21-23 is indefinite because it is not clear what “coincides” is meant by. The same rationale is applied to the recitation “coincides” in claim 3. Explanation is required.

Regarding claim 3, the recitation “when an offset voltage between the first input terminal and the second terminal has the temperature characteristic” on lines 4-5 is indefinite because it is not clear what “has a temperature characteristic” is meant by. As understood by the Examiner, the offset voltage varies with the change of temperature. The recitation ‘the first reference voltage sets the temperature characteristic” is indefinite because it is not clear how the “first reference voltage” can set the “temperature characteristic”.

Claim 4 is indefinite because the following elements cannot be identified in the drawing: first to sixth capacitors and first to twelfth switch circuits. The Applicant is requested to point out these elements in figure 1 of the present application.

Claims 5-8 are indefinite because of the technical deficiencies of claims 1, 2 and 4.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art, figure 2 in view of Motegi et al. (US Pat. 6,653,999).

Regarding claim 1, the prior art, figure 2 shows a switched capacitor amplifier circuit, comprising: an operational amplifier; a plurality of switch circuits; a plurality capacitors; a two input terminals (141) and (141); figure 2 shows a reference voltage generator circuit generating two reference voltage (Vref1) and (Vref2) supplying voltages to the two inputs terminals. Figure 2 does not show that the noise components of the “standard voltage” and the “reference voltage” are in phase for reducing noises cause by offset voltage adjustment. Figure 3 of Motegi shows a reference voltage generator circuit generating a “reference voltage” at node (103) and a “standard voltage” at node 104. The noise components of these voltages are in phase because they are generated from a same source of reference voltage (VLCDO) and resistive elements. Therefore, it would have been obvious to those skilled in the art at the time the invention was made to replace the reference voltage generator circuit of the prior art with the reference generator circuit taught by Motegi that has fewer active elements for reducing the size of the circuit and for minimizing the production cost.

Regarding claims 2 and 3, the combination of the prior art and figure 3 of Motegi shows a switch capacitor circuit amplifier circuit comprising: first and second input terminals (141, 142), first and second capacitors (101, 102), an op-amp, first and second reference voltage terminals coupled to the left sides of capacitors (101) and (102). The first reference voltage (VLCDO) and the second reference voltage (VLCD1) can be adjusted (col. 4, lines 8-

12) to cancel out the offset voltage between the first and second input terminals due to the variation of the ambient temperature.

Regarding claim 4, the circuit of the combination of the prior art and Motegi is identical to the circuit of figure 1 of the present application. The combination shows a switched capacitor amplifier circuit comprising first to sixth capacitors and first to twelfth capacitors connected as described in claim 4.

Claims 5-8 are also rejected under 103(a), the recitation "An electronic device" is merely intended use thus, it does not further limit the limitations of the claim. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Therefore, this limitation has not been given patentable weight.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hiep Nguyen whose telephone number is (571) 272-1752. The examiner can normally be reached on Monday to Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hiep Nguyen

11-19-04



TUANT LAM  
PRIMARY EXAMINER